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Insect related Interactions at a Multi-trophic Ecosystem

Resistance of sugarcane, *Saccharum* spp., to the sugarcane aphid, *Melanaphis sacchari* (Zehntner) (Hemiptera: Aphididae), the vector of *Sugarcane yellow leaf virus*

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The sugarcane aphid Melanaphis sacchari (Zehntner) (Hemiptera: Aphididae) is the main vector of the *Sugarcane yellow leaf virus* (SCYLV; genus Polerovirus, family Luteoviridae), a disease of economical importance in the sugarcane growing area. Resistance was detected in the sugarcane cultivar R 365, using a three-year field trial in La Reunion island. In laboratory, R 365 reduced aphid populations on potted plantlets and excised leaves. Using the electrical penetration graph technique, we detected a delayeddelayed aphid salivation in phloem and inhibition of passive phloem sap uptake in R 365. Future research to evaluate the resistance durability and efficiency against Melanaphis sacchari diversity and its potential for reduction of SCYLV incidence through sugarcane cultivation schemes will be discussed

Keywords:*Saccharum spp., aphids, antibiosis, antixenosis, EPG*